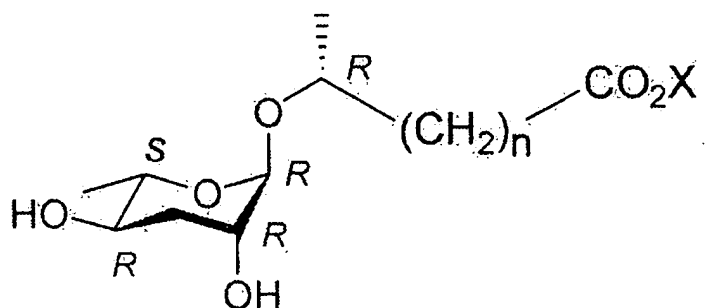


What is claimed is:

1. A pheromone compound having a stereochemistry formula (I-1)



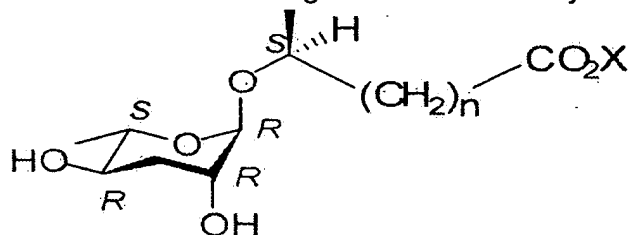
(I-1)

where, X is H, alkali or alkali earth metal and n is 1-6 integer.

2. The pheromone compound of claim 1, wherein the compound of formula (I-1) is 6R-(3,6-dideoxy-L-arabino-hexopyranosyloxy)heptanoic acid.

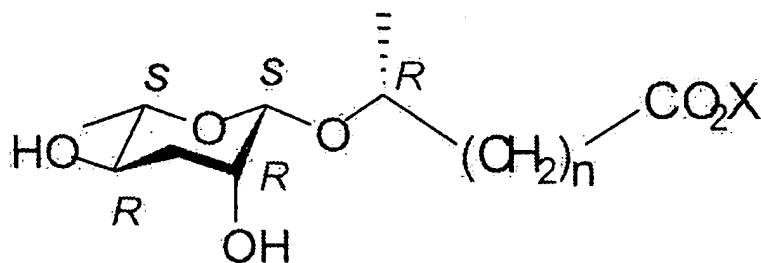
3. The pheromone compound of claim 1, wherein the compound of formula (I-1) is alkali or alkali earth metal salt of 6R-(3,6-dideoxy-L-arabino-hexopyranosyloxy)heptanoic acid.

4. The pheromone compound of claim 1, wherein the compound of formula (I-1) is S-form stereoisomer having a stereochemistry formula (I-2).



(I-2)

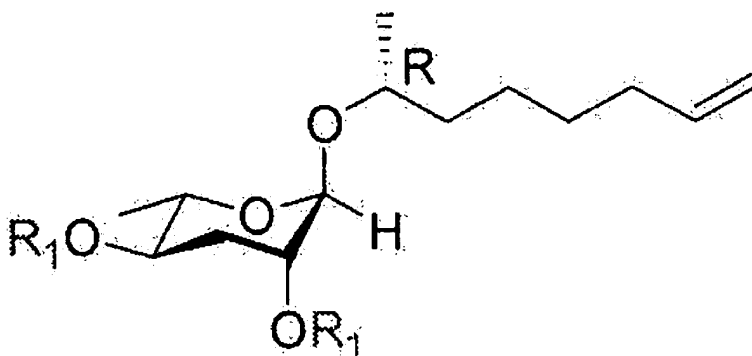
5. The pheromone compound of claim 1, wherein the compound of formula (1-1) is C-1' S-form stereoisomer having a stereochemistry formula (I-3).



(I-3)

5

6. A pheromone intermediate having a formula (X).



(X)

where, R₁ is H, benzoyl or benzyl group.

10

7. A pheromone intermediate having a formula (XI).



(XI)

where, R₂ is H, benzoyl or benzyl group.

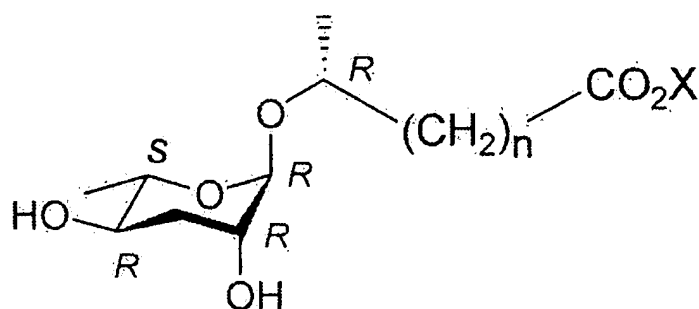
15

8. A preparation method for a pheromone compound having a stereochemistry formula(I-1), the method comprising the steps of:

acetalation of compound of formula (II) with compound of formula (III) in the presence of Lewis acid catalyst;

5 converting an aliphatic terminal double bond of produced coupling reactant to an organic acid by an oxidant; and

removing two O-benzoyl protecting group of deoxyrhamnosyl group by a base and acidifying by a acid.



(I-1)



(II)



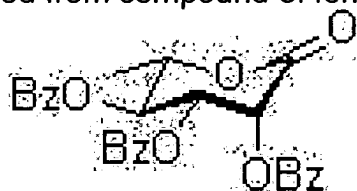
(III)

9. The preparation method of claim 8, wherein the catalyst is $\text{BF}_3\text{-Et}_2\text{O}$ and molecular sieves.

10. The preparation method of claim 8, wherein the oxidant is KMnO_4 and NaHCO_3 is used as a supplement agent.

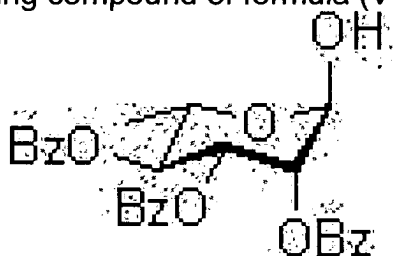
11. The preparation method of claim 8, wherein the base is of NaOH or KOH and the acid is amberlite resin type acid.

12. The preparation method of claim 8, wherein the compound of formula (II) is obtained from compound of formula (VII).



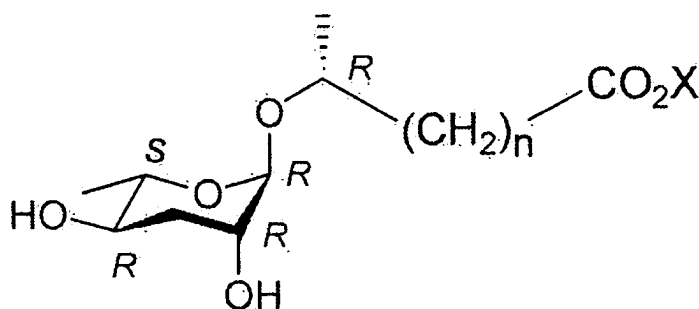
(VII)

13. The method of claim 12, wherein the compound of formula (VII) is obtained by oxidating compound of formula (VI).



(VI)

14. A use of a pheromone compound of 6R-(3,6-dideoxy-L-arabino-hexopyranosyloxy)-heptanoic acid having a stereochemistry formula (I-1) and its alkali and alkali earth metal salts as medical agent for curing disease relating to aging and stress.



(I-1)

where, X is H, alkali or alkali earth metal and n is 1-6 integer.